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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,403	12/20/2001	Ernst-Ulrich Simon	2000F80205 US	2081

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EXAMINER

THOMPSON, GREGORY D

ART UNIT PAPER NUMBER

2835

DATE MAILED: 05/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
**10/029,403**

Applicant(s)  
**Simon**

Examiner  
**Gregory Thompson**

Art Unit  
**2835**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Feb 19, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 11, 14-16, and 19-22 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11, 14-16, and 19-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on Feb 19, 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1) ☐ Certified copies of the priority documents have been received.  
2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other \_\_\_\_\_

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1. Claim 15 is objected to because of the following informalities: Claim 15, line 3 language of "connected" should be "mounted" to provide consistent claim language with amendment to claim 11. Appropriate correction is required.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 14-16, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hochstein in view of Pederson.

Hochstein discloses a light source or assembly with LED's 28 mounted alongside one another on a face of board 26 electrically connected to tracks, patterns on board 26. Board 26 is thermally and adhesively mounted/connected to stable mounting board 36a by adhesive 58 on the opposite face to the face where LED's 28 are mounted on board 26. The tracks or patterns would obviously end in known contact pads and lines as known in the board art to electrically interconnect the diodes on board 26. The encapsulate extending as far as the light outlet the diodes would be the material usually plastic that surrounds the circuitry of the diodes just like a chip would have for protection. The plastic is labeled in Figure 4.

Hochstein does not disclose a flexible board. Pederson discloses a flexible board 14 with LED's 16 thereon.

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Therefore, considered obvious that board 26 could be a flexible board as taught by Pederson to provide ease in mounting to board 36a and provide ease in electrical connection for the diodes in a small place with board 36a providing excellent support and thermal enhancement to LED's 28.

3. Claims 11, 14-16, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheriff et al in view of Metz, Jr.

Cheriff discloses a flexible board or cable 11 with interconnected tracks, pads or the like connected to a mounting board or sink 14 by thermally conductive adhesive for interconnecting portions of a display system. The sink 14 provides cooling for one or more chips or other devices mounted to carrier 12 electrically interconnected by the tracks and pads. The flexible board 11 does project at one side beyond the sink 4 to allow connector, plug 16 at a free end of the one side to be electrically connected to an element of the display system. The connector 16 is considered the obvious full equivalent to the claimed plug in claim 22 since connector 16 provides electrical connection and is an integral part of board 11 thus providing less parts.

Cheriff discloses no LED. However, col. 3, line 10 states other devices can be carried by carrier 12 to compose the display system.

Metz discloses a conventional LED display chip or the like 2 mounted to a board 10. The diodes in display 2 are mounted alongside one another in the material of display 2 usually plastic that encapsulates the diodes for protection. The encapsulate material would extend as far as the light outlet surface of each diode.

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Therefore, since Cheriff discloses in col. 3, line 10 that other devices can be used it is considered obvious to one skilled to provide the conventional LED chip taught by Metz plugged into the carrier 12 electrically connected to the tracks, pads on board 11 by the carrier 12 and cooled by the sink 14 in the display system to provide excellent heat enhancement to the LED chip as the LED chip operates to display system information.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Leyba, Nishihashi et al and Bauknecht et al disclose flexible board, LED's and cooling, respectively.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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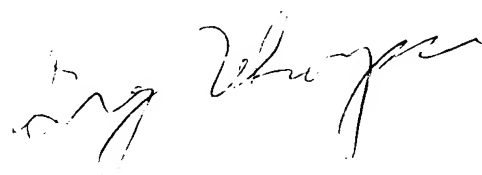
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Thompson whose telephone number is 308-2249. The examiner can normally be reached on Mon-Thurs. from 6:00 Am to 4:30 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg, can be reached on (703) 308-4215. The fax phone number for the organization where this application or proceeding is assigned is 308-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1782.

Thompson/ek

05/13/03

A handwritten signature in cursive script, likely belonging to Greg Thompson, the examiner mentioned in the text. The signature is written in dark ink and is located in the lower right quadrant of the page.